



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/669,980

09/24/2003

Tibor Farkas

038190/256280

5790

67141

7590

10/16/2007

ALSTON & BIRD, LLP
BANK OF AMERICA PLAZA
101 SOUTH TRYON STREET, SUITE 4000
CHARLOTTE, NC 28280-4000

EXAMINER

RUDDOCK, ULA CORINNA

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

10/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/669,980	Applicant(s) FARKAS ET AL.	
	Examiner Ula C. Ruddock	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Examiner has carefully considered Applicant's response filed August 3, 2007. In view of Applicant's amendment, the previously set forth 112, 2nd paragraph rejection has been overcome.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 1, 2, 4-9, and 14-23 rejected under 35 U.S.C. 103(a) as being unpatentable over Dennis et al. (US 2004/0161989) in view of Steeghs et al. (US 2003/0037361). Dennis et al. disclose an anti-projectile barrier fabric which takes the form of a plural-layer assembly of two outer cloth layer and a pair of foam layers and a central, inner strand layer (abstract). The fabric can be used to make other bullet-protecting structures such as vests, blankets, and tents [0010]. The outer cloth layers may be made of nylon cloth [0012], the foam-like layers are preferably formed of cross-linked polyethylene [0013], and the central strand layer is made of woven Kevlar [0014]. The foam layers are surface bonded to the cloth layers' inner surfaces (claim 1). It is the Examiner's position that the foam layer which is surface bonded to the cloth layers would partially infiltrate the fabric layer, to a degree. With regard to Applicant's disclosure of a hydrazine fuel tank, fuel system of a vehicle, and hydraulic system of a vehicle, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Dennis et al. disclose the claimed invention except for the

teaching that the first layer comprises a honeycomb cross-section and that is comprised of aramid of polyethylene, or PBO fibers.

Steeghs et al. (US 2003/0037361) discloses a ballistic vest containing a stack of fabrics wherein the outer fabric is a loose fabric which can be a honeycomb weave [0011 and claim 1]. The fabrics can be made of strong fibers such as aramid, PBO, and UHMW polyethylene [0022]. It would have been obvious to one having ordinary skill in the art to use Fisher's teaching of an outer honeycomb weave comprising aramid, polyethylene, or PBO fibers as one of the outer cloths of Dennis et al., motivated by the desire to create a lightweight impact resistant composite that has sufficient resistance to deformation in small areas while maintaining flexibility and isolating and dissipating shock.

Regarding claims 7, 9, 14, and 15, Dennis et al. and Steeghs et al. disclose the claimed invention except for the teaching that the first and second fabric layers are capable of absorbing up to about 30,000 ft-lbs of kinetic energy without rupture and that the insulation is resistant to penetration by a fragment having a kinetic energy greater than about 1700 ft-lbs or greater than about 3500 ft-lbs.

Although Dennis et al. and Steeghs et al. do not explicitly teach the claimed kinetic energy absorbance and penetration resistance, it is reasonable to presume that these properties are inherent to the panel of Dennis et al. and Steeghs et al. Support for said presumption is found in the use of like materials (i.e. outer woven Kevlar layers with honeycomb structure and a central polymeric foam core). The burden is upon Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. In addition, the presently claimed property of first and second fabric layers that are

capable of absorbing up to about 30,000 ft-lbs of kinetic energy without rupture and a penetration resistance of a fragment having a kinetic energy greater than about 1700 ft-lbs or greater than about 3500 ft-lbs, would obviously have been present once the Dennis et al. and Steeghs et al. product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

Rejection is maintained.

4. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dennis et al. (US 2004/0161989) and Steeghs et al. (US 2003/0037361), as applied to claim 1 above, and further in view of Brink et al. (US 3,381,420). Dennis et al. and Steeghs et al. disclose the claimed invention except for the teaching that the material further comprises a glass fabric layer and a radiation control film layer.

Brink et al. (US 3,381,420) discloses an insulation material used to insulate tanks, pipes, and automobiles (col 3, ln 72-75 and col 4, ln 1-2). The structural material contains a flexible film that is used for facing the core, which can be a metallized polyester. The preferred metallizing material is aluminum (col 3, ln 24-32). The structural material further contains one or more layers of woven fiberglass cloth to increased the impact resistance of the structural material (col 2, ln 25-30). It would have been obvious to have used Brink's metallized polyester film layer and woven fiberglass cloth in the panel of Dennis et al. and Steeghs et al., motivated by the desire to create a panel having increased resistance to impact and damage and having increased strength.

Rejection is maintained.

Response to Arguments

5. Applicant's arguments filed August 3, 2007, have been fully considered but they are not persuasive for the reasons set forth. Applicant argues that the cellulose core material of Dennis et al. would not partially infiltrate the outer fabric layers because of the adhesive layers disposed between the fabric and foam layers. This argument is not persuasive because Figures 2 and 3 of Dennis et al. do not show any adhesive layers between the fabrics and foam. Furthermore, Dennis et al. discloses that the 5-layered structure shown in Figures 2 and 3 (i.e. two outer cloth layers, two intermediate foam layers, and central Kevlar layer) is very suitable to most applications [0011]. Finally, Dennis does not show that the adhesive layers are required; Dennis only discloses that the layers are "preferably joined" by an adhesive. Therefore, the Examiner takes the position that the adhesive layer is not a required component of the barrier fabric of Dennis and the cellulose core material would partially infiltrate the outer fabric layer to some degree. As a result, the rejections are maintained.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is 571-272-1481. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/U. C. R./

/Ula C Ruddock/
Primary Examiner, Art Unit 1794